



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0342; Project Identifier MCAI-2020-01547-T; Amendment 39-21530; AD 2021-09-16]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-100-1A10 airplanes. This AD was prompted by a report of a number of low altitude engine surge incidents during takeoff. This AD requires revising the existing airplane flight manual and applicable corresponding operational procedures to provide the flightcrew with procedures to require the engine bleeds to be “ON” during takeoff. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the

instructions for submitting comments.

- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this final rule, contact Bombardier, Inc., 200 Côte Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0342.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0342; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any comments received, and other information. The street address for the Docket Operations office is listed above.

FOR FURTHER INFORMATION CONTACT: Jiwan Karunatilake, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

Transport Canada Civil Aviation (TCCA) which is the aviation authority for Canada, has issued TCCA AD CF-2020-47, dated November 18, 2020 (TCCA AD CF-2020-47) (referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain Bombardier, Inc., Model BD-100-1A10 airplanes. You may examine the MCAI on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0342.

This AD was prompted by a report of a number of low altitude engine surge incidents during takeoff. Under certain environmental conditions (e.g. temperature/thermal inversion), the existing engine control features can lead to engine surge. The FAA is issuing this AD to address engine surges during takeoff, which can result in significant loss of engine thrust or even engine shutdown and can occur on both engines at the same time. See the MCAI for additional background information.

Related Service Information under 1 CFR Part 51

Bombardier has issued Section 02-04, “Systems Limitations,” of Chapter 02, “LIMITATIONS”; and Section 04-03 of Chapter 04, “NORMAL PROCEDURES”; of Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 63, dated April 1, 2021. Section 02-04, “Systems Limitations,” of Chapter 02, “LIMITATIONS” provides a procedure for “Air Conditioning and Pressurization”; and Section 04-03 of Chapter 04, “NORMAL PROCEDURES” provides a procedure for “Taxi and Before Takeoff.” The procedures require the left and right engine bleeds to be “ON” during takeoff. (For obtaining the procedures for Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.) This service information is reasonably available

because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is issuing this AD because the FAA evaluated all pertinent information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Requirements of this AD

This AD requires revising the existing airplane flight manual and applicable corresponding operational procedures to provide the flightcrew with procedures that require the engine bleeds to be "ON" during takeoff.

Explanation of Incorporating Information Specified in an AFM Revision

This AD requires including the information that is provided in the referenced AFM revision in paragraph (g) of this AD. The language in paragraph (g) of this AD is designed to allow incorporating the specific information, regardless of the revision level of the AFM in use, provided the language is identical to the referenced AFM revisions specified in paragraph (g) of this AD. The language in a later revision of the Challenger 300 Airplane Flight Manual, Publication No. CSP 100-1 that is the same as the language in Challenger 300 Airplane Flight Manual, Publication No. CSP 100-1, Revision 63, dated April 1, 2021, may be incorporated.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has

found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because engine surges during takeoff can result in significant loss of engine thrust or even engine shutdown and can occur on both engines at the same time. In addition, the compliance time for the required action is shorter than the time necessary for the public to comment and for publication of the final rule. Therefore, the FAA finds good cause that notice and opportunity for prior public comment are impracticable. In addition, for the reasons stated above, the FAA finds that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0342; Project Identifier MCAI-2020-01547-T” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that

you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Jiwan Karunatilake, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Interim Action

The FAA considers this AD interim action. The engine manufacturer is in the process of developing new engine control software to address the problem of low altitude engine surges occurring under certain environmental conditions. Once this software is developed, approved, and available, the FAA might consider additional rulemaking.

Regulatory Flexibility Act (RFA)

The requirements of the RFA do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 356 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
1 work-hour X \$85 per hour = \$85	\$0	\$85	\$30,260

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-09-16 Bombardier, Inc.: Amendment 39-21530; Docket No. FAA-2021-0342; Project Identifier MCAI-2020-01547-T.

(a) Effective Date

This airworthiness directive (AD) becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-100-1A10 airplanes, certificated in any category, serial numbers 20003 through 20457 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 36, Pneumatic; 73, Engine Fuel and Control.

(e) Reason

This AD was prompted by a report of a number of low altitude engine surge incidents during takeoff. The FAA is issuing this AD to address engine surges during takeoff, which can result in significant loss of engine thrust or even engine shutdown and can occur on both engines at the same time.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Revision of the Airplane Flight Manual (AFM)

Within 60 days after the effective date of this AD: Revise the existing AFM and applicable corresponding operational procedures to include the information in the “Air Conditioning and Pressurization” procedure in Section 02-04, “Systems Limitations,” of Chapter 02, “LIMITATIONS”; and the “Taxi and Before Takeoff” procedure in Section 04-03 of Chapter 04, “NORMAL PROCEDURES”; of the Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 63, dated April 1, 2021.

Note 1 to paragraph (g): For obtaining the procedures for Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.

(h) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the information in Section 02-04, “Systems Limitations,” of Chapter 02, “LIMITATIONS”; and Section 04-03 of Chapter 04, “NORMAL PROCEDURES”; of any airplane flight manual specified in paragraphs (h)(1) through (3) of this AD.

(1) Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 60, dated July 1, 2020.

Note 2 to paragraph (h)(1): For obtaining the procedures for Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.

(2) Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 61, dated September 25, 2020.

(3) Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 62, dated December 22, 2020.

(i) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(j) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2020-47, dated November 18, 2020, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0342.

(2) For more information about this AD, contact Jiwan Karunatilake, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart

Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (4) of this AD.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Section 02-04, “Systems Limitations,” of Chapter 02, “LIMITATIONS,” of the Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 63, dated April 1, 2021.

(ii) Section 04-03 of Chapter 04, “NORMAL PROCEDURES,” of the Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, Revision 63, dated April 1, 2021.

(3) For service information identified in this AD, contact Bombardier, Inc., 200 Côte Vertu Road West, Dorval, Québec H4S 2A3, Canada; North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; Internet <https://www.bombardier.com>.

Note 2 to paragraph (j)(3): For obtaining the procedures for Bombardier Challenger 300 Airplane Flight Manual (Imperial Version), Publication No. CSP 100-1, use Document Identification No. CH 300 AFM-I.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 23, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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